ZX-Appeal

$1.50

vancouver sinclair users group

next meeting:

KILLARNY COMMUNITY CENTRE
6260 KILLARNY STREET
VANCOUVER

FRIDAY
FEB 13/87
7:00PM

ZXAPPEAL IS A MONTHLY
NEWSLETTER PUT OUT BY THE
VANCOUVER SINCLAIR USERS GROUP.
FOR MORE INFORMATION ON THE
CLUB AND ZXAPPEAL SEE THE BACKCOVER.

inside

sinclair ZX80

sinclair ZX80

THIS ISSUE......................

As Johnny Fever says "hey, fellow babies!" After my gentle reminder last month re: participation, I found the bag o'mail overflowing with submissions. Don't stop now - we're on a roll! We continue Harvey T's article on a serial interface for the QL. Rusty T. turns up with his 'Poor Man's WP' for the 2068. Ken A. offers a timely reminder re: static electricity and also a book review. New Member Bob D. submits a member profile and a 2068 program he uses in a professional capacity. Gerd B. tenders a software review. Glenn R. offers a hardware review. Bill R. presents a 2068 program to allow partial screen saves. If space allows we'll also try to include some interesting programs, articles and other stuff garnered hither and yon. Oh yes, Vince L. would like to make a small adjustment to his little hardware project of last month.

****
BITS & PIECES......................

Just a few things to bring to your attention this month
...the computerfest, sorry, THE SECOND ANNUAL MIDWEST TIMEX-SINCLAIR COMPUTER FEST is gathering momentum and appears to be well on its way to being a much bigger success than the one last year. May 2 - 3, Holiday Inn North, Indianapolis, Indiana. Many groups are going to be represented as well as almost all TS dealers and magazines. Seminars both days; TS swap meet and flea market, and a whole bunch of just plain TS fun. If anyone wants more info give me a call. I'll be putting further details in a later newsletter.
...be sure to attend the FEB meeting and pick up the latest CANADA COMPUTES mag.
...CITY-LINK BBS is up again at 222-2000. Completely revamped. I can't think what they might've left out. The extra features are only

open to pay members but there's lots left for the casual tourist. Have a look.
...New Member Bob D. apparently didn't believe me about the Timex Service turnaround time. Now his machine is going to the big repair depot in Little Rock. In lieu of flowers, please send donations to Hackers Anonymous.
...what if the SCLD in your 2068 went and Timex was no longer offering service, would you know what to do? Would you, Bunky? The SCLD is the only 2068 chip not available commercially but CATS, the Washington, DC, group has purchased 100 chips directly from Timex Portugal. These can be purchased for $20.00US each, with a discount for volume. Pretty cheap insurance to make sure your pride and joy 'keeps on tickin'.
...the Robot SIG (Vancouver Robot Club) had a great meeting at Al W.'s place the other week. The word is that Karl's article might appear in BYTE this spring. Karl's last class is underway. Anyone interested in Robots has missed the boat as far as Karl's class goes but the club meetings are a great place to learn.
...make sure you don't miss out on the Great QL Draw of '87. Tickets will be on sale at the meeting. Just 82 left!
****

RENEWING MEMBERS:

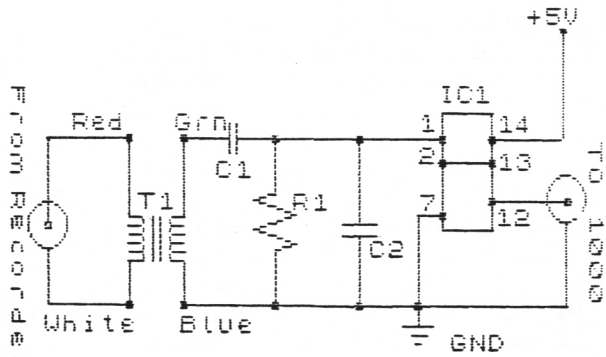Brad Thomas, Wilf Rigter,
Bob Denison, Dave Ross

NEW MEMBERS:

Tim Stoddard, Rego Park, NY
Bob Dick, North Vancouver, B.C.
Jay Mundy, Vancouver, B.C.

Remember to renew at the meeting if you received the dreaded EXPIRY NOTICE.

ERRATUM

Ahem....Ladies and Gentlemen. May I just have a moment to draw something to your attention. Vince Lee advises that there was a small error on the schematic of his Signal Booster in last months issue: the transformer labeled T1 was in backwards. The correct placement is as below. Actually, this was a test to see how many of you just follow orders. "Well Done" to all who are now making this slight correction.
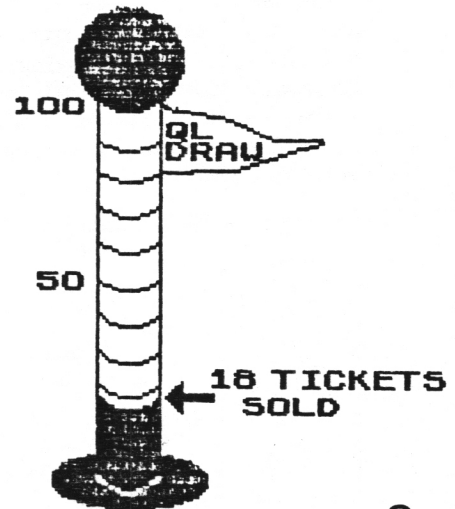
SCHEMATIC

✳✳✳BOLD✳✳✳

THIS LITTLE ITEM APPEARED SOME TIME BACK BUT A NUMBER OF MEMBERS MISSED IT FIRST TIME AROUND. THIS PROGRAM WILL CAUSE THE 2040 PRINTER TO PRINT IN "BOLD" TYPE---- -"ALL THE BETTER TO PHOTO-COPY YOU,MY DEAR".

```
  1 CLEAR 65506
  2 LET a=65507
 20 FOR i=a TO a+28
 30 READ b: POKE i,b
 50 NEXT i
 55 DATA 17,0,221,213,1,0,3,42,
54,92,36,126,167,31,182,18,35,19
,13,32,246,16,244,225,37,34,54,9
2,201
100 RANDOMIZE USR a
130 REM SAVE "BOLD" CODE 65507,
29 as direct command
140 REM Load "BOLD" CODE and th
en RANDOMIZE USR 65507
150 REM to return to the standa
rd character set POKE 23607,60
160 REM this program works with
LLIST, LPRINT, and COPY
```

****

Meeting Date.....

FEBRUARY

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10	11	12	**13**	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

QL DRAW

100

50

← 18 TICKETS SOLD

3

The meeting opened almost on time at 7:18 PM due, according to the prez, to your humble scribe's late arrival. Ken mentioned that Rois Harder is back in town & will regale us with tales of sunny arabie one of these months. Hopefully he has his QL with him. The prez then raised the idea of a HELP REGISTRY for people having hardware problems, or wanting buying advice. The outcome of this discussion was that we each should bring a list of the hardware we have to the next meeting. Areas of expertise are also relevant in this matter.

Rod, the editor / treasurer then stood to tell us we had about $280.00 in the credit union. He mentioned that he had ordered the QL raffle prize from the states & he had got 100 tickets printed. These are available from him for $2.00 each. He then proceeded to do some serious bitching about the queen's most loyal post office. Next day service ain't what it used to be. The upshot of this is that many of the stamps on the newsletter were not cancelled & people were wondering about reusing the envelopes. At this point the prez popped up with "We don't just talk cheap, we are cheap!" Tune in next month for the amazing timex stamp rerun.

There was some discussion about libraries. There is concern that because the 2068/QL markets are still viable, we should not have anything but expressly public domain software in the club library. Ian,the ZX81 librarian, stood to discuss loading problems. The upshot of much discussion about azimuths, residual magnetism & volume levels was that next month we will have a hardware session on alignment & hopefully describe a club standard.

Harry Slot publicly disavowed any affiliation with the Ayatollah Khomeini.

The door prize of Cruncher won by Glenn Read.

The meeting degenerated into demo city with John Brohman from Weymil pushing Sinc Artist Hi Res 2, Rod demoing ARTWORX for the 2068, & Ken demoing the new ZSpeak board running his ZVoice phonetic speech software (ZX81). Ken is by the way looking for volunteers to adapt that software for the 2068. John later demoed TIMACHINE, a basic compiler, as well.

The next robotics club meeting is Jan.21/87 at 470 Granville.

FRANK & ERNEST BOB THAVES

I'VE BEEN SITTING AT MY PERSONAL COMPUTER SO LONG I'VE DEVELOPED A FLOPPY DISK.

THAVES 3-4

Part 2 of Harvey's article about building
a Serial Interface for the QL.
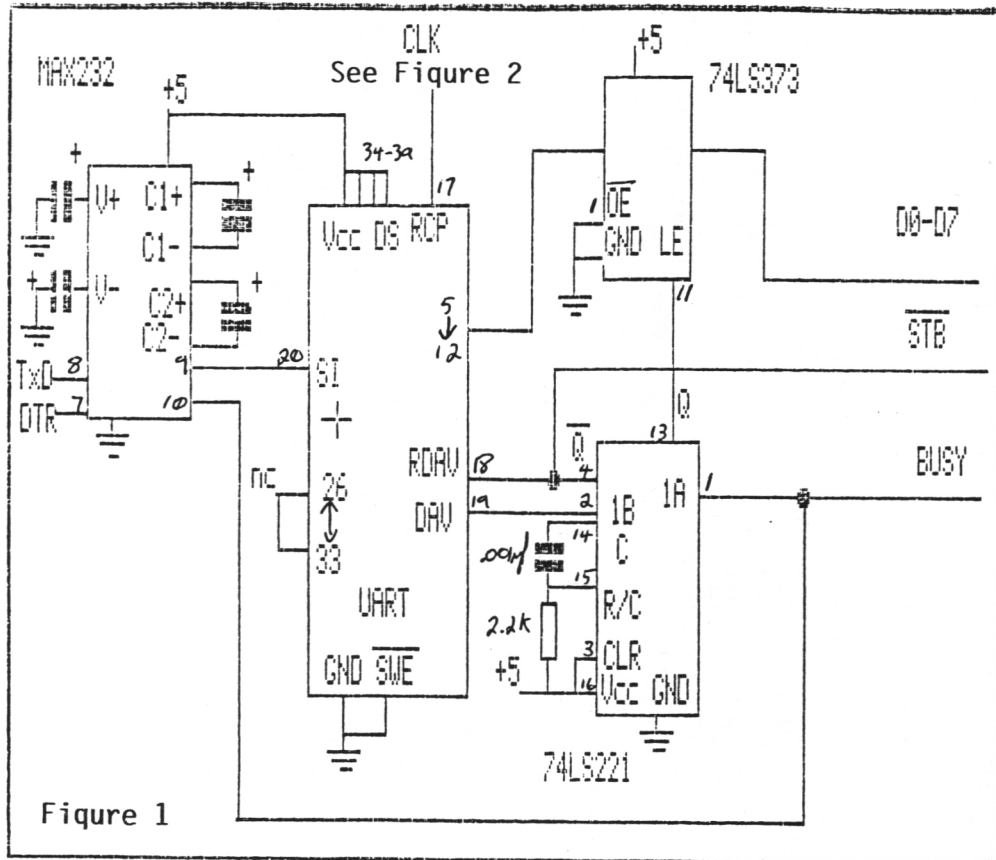

Figure 1
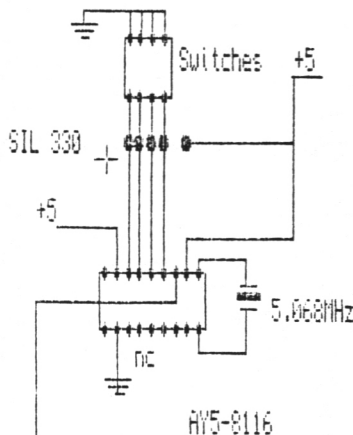

Figure 2

```
100 REMark PRINTER TEST PROGRAM
110 REMark
120 REMark Select appropriate BAUD here
130 BAUD 9600
140 OPEN#3,ser1hr
150 FOR n=32 TO 127: PRINT#3,CHR$(n);
160 PRINT#3, "That's all!"
170 CLOSE#3
```

EASY WORD-PROCESSING WITH YOUR SMALL PRINTER.

By Rusty Townsend.

I recently acquired a stack of SYNC magazines, and while browsing through them came across a short and simple word-processing program that was written for the TS1000 computer for use with a small printer such as TS2040.

Since I include myself in the group of TS2040 owners who are reluctant to learn a complicated word-processing program just to put out a few words of readable text on our small printers, I'm bringing the program to your attention with the hope that it might spur a few others to dash something off for Rod to use in our newsletter.

The program treats your text input in Line 10 as a string, whether it's a title, a sentence, or a paragraph. You can't LPRINT more than one of them at a time unless they're joined together with spaces, and figuring out the correct number of spaces you would need to join each text string could take more time than LPRINTing one text string and starting a new one.

So just type out one text string at a time, ignoring lines that seem to end or start with a space and words that start on one line and finish on the next one.

ENTER Line 10 with your completed text string into the program, RUN it and when LPRINTed, your text string will come out properly spaced and without any broken words. You could change the program to PRINT it to the screen and then COPY it, but you may end up COPYing a lot of blank screen.

After LPRINTing one text string and re-LISTing the program, I found it more convenient to start a new Line 10 than to EDIT the one LISTed since this left my previous text string visible for reference at the top of the screen, and after that my earlier text strings could be referred to on the printer tape.

The original program and a much fuller explanation of it can be found in the SYNC issue of NOV/DEC 1982.

As written for the TS1000, Line 40 used CHRS$ 0 which I have changed to CHRS$ 32 for use with my TS2068. Also, I did find one bug in the program in that it wouldn't LPRINT a text string of less than 32 characters and/or spaces. This I corrected by the insertion of Line 15.

Following is the program as used in producing this article.

```
 10 LET A$="(Your text string)"
 15 IF LEN A$<=32 THEN LPRINT A$
 20 FOR R=32 TO LEN A$ STEP 32
 30 FOR K=0 TO 32
 40 IF A$(R-K)=CHR$ 32 THEN GO TO 60
 50 NEXT K
 60 LPRINT A$((R-31) TO (R-K))
 70 LET R=R-K
 80 IF (R+32)>LEN A$ THEN GO TO 100
 90 NEXT R
100 LPRINT A$((R+1) TO )
```

EXTENDED BASIC

The demonstration program fills the screen with an assortment of patterns and continues to write, flash, draw and undraw words and pictures with bedazzling speed. A scroll demonstration is followed by a 6000 characters per second display of numbers 0 to 9 and all the letters of the alphabet. During a shooting demonstration a barrier gets wiped out by some tracer bullets : you see each trace plotted and immediately disappear. All this is done without screen flicker in E X T E N D E D Basic ! (Not in M/C code)

The program, c 1983 Frits Benjest, takes up only 3.5 K of memory and can be merged with other BASIC programs. It offers 22 commands/functions in addition to the standard operating system :
* EXTENDED BASIC does not require the use of PEEK, POKE, or USR. Instead, commands are placed in REM lines preceeded by GOSUB 0.
* Comprehensive screen utilities add several powerful (and FAST!) display options, and utilize ALL 24 lines on the screen.
* New CLS and SCROLL commands will not disrupt your display file.
* PRINT automatically scrolls when the bottom line is reached : no more 5/ error codes !
* READ/DATA/RESTORE and LEFT$/MID$/RIGHT$ commands make translation from other BASICs a snap, and open new dimensions to your programming.

* IN and OUT commands allow control of I/O mapped peripherals (sound generators, A/D-D/A, printer, etc.) from within BASIC - even in SLOW !
* Comprehensive error trapping makes EXTENDED BASIC virtually crashproof. Meaningful error codes flag syntax and format errors just like your resident BASIC.
* As many commands as you like may be included in a single REM statement. MULTIPLE STATEMENT lines on the ZX81/TS !

The programs (Demo and working versions) loaded without difficulty. The documentation by Fred Nachbaur is clear , complete and compressed into a 23 page manual. I jumped right into EXTENDED BASIC programming by typing in the demonstration program on page 20 of the manual on how EXTENDED BASIC can be used to create screen display pizzaz : I soon got stuck and learned very quickly the importance of colons, semi-colons and commas and their correct placements in program lines.

There are display, data & slicing and input/output commands for graphics , data handling and peripheral control. With this program in memory you can now enter BASIC programs written for other machines. If you like writing your own programs, you will enjoy it even more with EXTENDED BASIC.

Published by :
Thomas B. Woods
P.O. Box 64, Jefferson, NH 03583
United States of America

****

```
    1 REM security alarm program
for 2068 or Spectrum. Reprinted
from Jan/87 ZX Computing.
Embarrass your friends...catch
your little brother as he messes
with your stuff.
    2 REM be sure to SAVE a copy
before RUNning. RUN then touch a
key.
   20 CLEAR 65345: FOR n=65346 TO
65367: READ a: POKE n,a: NEXT n
   40 PRINT #0;"© 1982 Sinclair R
esearch Ltd
                 © 1983 Timex Comp
uter Corp"
   50 PAUSE 0: CLS : PRINT AT 10,
9; FLASH 1;"SECURITY ALERT"
   60 RANDOMIZE USR 65346
   70 DATA 58,72,92,15,15,15,30,0
,243,211,254,238,16,67,16,254,29
,32,246,251,24,234
```

THOMAS J. BENT's ZX81/TS1000 ROM UPGRADE

By Glenn Read

There is a large quantity of software available for the ZX81 - TS1000 but it is not to often that software changes to the 8K ROM itself are made available.

Thomas J. Bent has done exactly that with his 8K ROM upgrade of the Sinclair operating system.

The upgrade consists of a new 8K ROM and a thorough documentation package. Changes in the new ROM are categorised in two sections:-

1. New features.
2. Fixes to existing bugs.

Some of the most useful new features of the upgrade involve speed increases such as a fast initialisation on power up that gives a faster time to the 'K' cursor even with just 16K RAM, for 64K users there should be a impressive improvement.

The second speed change is making all command line entries automatically in fast mode, even if you were previously in slow or display mode as soon as a command line is entered it will switch to fast.

Other improvements to existing functions speeds are a faster scroll and changes made to the display system so when you do a CLS the screen is cleared without the painfully slow collapsing of the display file.

There have been changes made to the tape load routine so if there is a bad load the machine is reset as if you had used NEW this is supposed to clear memory much more elegantly than the existing system.

One very useful change enables you to create very large arrays (No not the radio telescope type).

Finally there has been a number of changes to the character display the Q,W,V,K,O,0 have all been tidied up and the pound sign has been replaced with a apostrophe. This last change I have found not to useful as I use my 81 for circuit design and documentation and it is a international standard to donate Negated logic levels with the pound sign - the mathematical / logical overscore being very difficult to print - unless you own a laser printer.

No more Bugs:-

Existing bugs that have been fixed are the LPRINT nuisance and divide bugs - the nature of these bugs are covered in detail in the documentation for those who have been fortunate enough not to have come across them.

The documentation gives listings of the machine code changes made and each of the improvements are also fully covered.

Overall I found the changes very useful especially to the programmer but mostly it illustrates what can be done with some perseverance to make changes to the operating system itself - I hope this review has given some insight to this upgrade and look forward to further upgrades in the future. High res' and built in fast load perhaps (Hardware group-hint hint).

```
********************************************
*
*
*    10 REM "FUTURISTIC CHARACTER F
ONT"
*    20 REM ***2068 in SPECTRUM
*             MODE****
*    30 FOR n=30000 TO 30035: READ
a: POKE n,a: NEXT n
*    40 DATA 33,0,61,17,0,118,1,0,3
,237,176,33,0,118,6,96,197,35,35
,35,35,6,4,126,79,203,63,177,119
,35,16,247,193,16,237,201
*    50 RANDOMIZE USR 30000
*    60 REM RUN program then POKE 2
3606,0: POKE 23607,117 to activa
te
*
```

```
  10 REM  By Frank Bouldin, Fort
Worth T/S Users Group
  15 REM Reprinted from the Jan/
87 issue of "The Data Expansion"
-- newsletter of the Fort Worth
T/S Users Group
  20 REM ----for TS 2068 machine
  30 LET d=200: LET p=100: CLS
  40 RESTORE p: READ a,b: BEEP .
05,34: PLOT a,b: LET p=p+10: RES
TORE d
  50 FOR n=1 TO 10: LET b=INT (R
ND*20)+15: READ x: READ y: DRAW
x,y: BEEP .05,b
  60 NEXT n: IF p=140 THEN GO TO
80
  70 LET d=d+20: GO TO 40
  80 RESTORE 300: PRINT #0;AT 1,
10;"Press Any Key": PAUSE 0: FOR
y=4 TO 26: READ c
  90 PRINT #0;AT 1,y;CHR$ c: BEE
P .05,x: LET x=x+1: NEXT y: PAUS
E 0: GO TO 30
  100 DATA 112,102
  110 DATA 20,18
  120 DATA 169,85
  130 DATA 224,3
  200 DATA 14,21,14,-22,-48,0,46,
70,100,-152
  210 DATA -13,-16,-197,0,-9,15,9
6,153,22,0
  220 DATA 85,0,-25,34,-11,-18,24
,0,-45,0
  230 DATA 32,51,70,0,-24,38,10,1
6,34,-54
  240 DATA -19,0,-11,-16,-48,0,-1
1,-17,11,17
  250 DATA -10,15,45,-66,67,0,-23
,36,10,16
  260 DATA -44,67,-23,-37,24,0,-4
5,0,35,51
  270 DATA -45,-66,11,16,-24,35,1
4,-20,12,20
  300 DATA 84,72,69,32,73,77,80,7
9,83,83,73,66
  310 DATA 76,69,32,84,82,73,65,7
8,71,76,69
```

BOOK REVIEW

SyncWare News: Vol 1, June 1983 - 1984

by Ken Abramson

For serious T/S1000 users who acquired their machine over the past few years, or for those who missed subscribing to the first editions of SyncWare News, $20 (see Dave Ross) will buy you a typeset collection of SyncWare Vol.1 major articles. If you aren't acquainted with this excellent newsletter, you may have heard of a few of its very high PROFILE contributors: Thomas B. Woods, Fred Nachbaur, Thomas Bent, & Paul Hunter, to name a few. Since the present subscription (bi-monthly) runs $20U.S., this collection represents good value at $20Can.

CONTENTS:

Software: Reviews, Efficient programming, Conversion tables & programs for controlling large printers, etc.

Hardware: Load signal conditioners, Joystick interfaces, Battery Back-up circuits, Input/Output controllers, Video drivers/inverters, Analog/digital conversion

Mathematics: Polar/cartesian conversion, Simultaneous equations, Determinants, Least squares fits, Regression, Differentiation, Integration, and more.

In general, this volume probably has something for every T/S1000 user. I personally found the discussion on controlling different printers extremely useful ... a must for those considering a larger printer. Lots of short articles, e.g.- Forth, are also very informative. Thomas Bent's math may go beyond the needs of many users, but his programs eloquently illustrate the enormous untapped power available from the 'little black doorstop' in the hands of a skilled programmer/mathematician.

```
   1 REM "BUZZWORDS" FOR THE ZX8
1,TS1000,TS1500 BY G.J.HUNT. REP
RINTED FROM THE AUSTRALIAN SINCL
AIR GAZETTE, JAN/FEB 85
   5 GOSUB 400
  10 PRINT "         INSTANT BUZZWO
RDS"
  20 PRINT "         --------------
---"
  30 PRINT "TECHNOLOGY HAS CREAT
ED A NEW    TYPE OF JARGON THAT
IS NEARLY ASINCOMPREHENSIBLE AS
IT IS       SOPHISTICATED. THIS
PROGRAM WILLHELP YOU MASTER THE
JARGON.     WITH IT YOU CAN CREA
TE AN       ALMOST ENDLESS VARIE
TY OF       INTELLIGENT-SOUNDING
 TECHNICAL  TERMS."
  40 PRINT
  50 PRINT "WHEN THROWN IN DURIN
G A CONVER- SATION OR LECTURE TH
EY ARE BOUNDTO COMMAND INSTANT R
ESPECT AND   APPRECIATION OF YOUR
 INTELLECT   AND EXPERTISE (AND P
OSSIBLY      CONFUSION AS WELL)."
  60 PRINT
  70 PRINT "PRESS ANY KEY TO STA
RT GENERATOR"
  80 IF INKEY$="" THEN GOTO 80
  90 CLS
 100 GOSUB 200
 110 PRINT AT 10,7;A$(N)
 120 GOSUB 200
 130 PRINT TAB 7;B$(N)
 140 GOSUB 200
 150 PRINT TAB 7;C$(N)
 160 FOR Z=0 TO 100
 170 NEXT Z
 180 GOTO 90
 200 RAND
 210 LET N=INT (RND*9)+1
 220 RETURN
 400 DIM A$(10,12)
 410 DIM B$(10,14)
 420 DIM C$(10,11)
 430 LET A$(1)="INTERGRATED"
 440 LET A$(2)="TOTAL"
 450 LET A$(3)="SYSTEMIZED"
 460 LET A$(4)="PARALLEL"
 470 LET A$(5)="FUNCTIONAL"
 480 LET A$(6)="RESPONSIVE"
 490 LET A$(7)="OPTICAL"
 500 LET A$(8)="SYNCRONIZED"
 510 LET A$(9)="COMPATIBLE"
 520 LET A$(10)="BALANCED"
 530 LET B$(1)="MANAGEMENT"
 540 LET B$(2)="ORGANIZATIONAL"
 550 LET B$(3)="MONITORED"
 560 LET B$(4)="RECIPROCAL"
 570 LET B$(5)="DIGITAL"
 580 LET B$(6)="LOGIC"
 590 LET B$(7)="TRANSITIONAL"
 600 LET B$(8)="INCREMENTAL"
 610 LET B$(9)="NEW-GENERATION"
 620 LET B$(10)="POLICY"
 630 LET C$(1)="OPTIONS"
 640 LET C$(2)="FLEXIBILITY"
 650 LET C$(3)="CAPABILITY"
 660 LET C$(4)="MOBILITY"
 670 LET C$(5)="PROGRAMMING"
 680 LET C$(6)="CONCEPT"
 690 LET C$(7)="TIME-PHASE"
 700 LET C$(8)="PROJECTION"
 710 LET C$(9)="HARDWARE"
 720 LET C$(10)="CONTINGENCY"
 730 RETURN
 800 CLEAR
 810 SAVE "BUZZWORD暑"
 815 SLOW
 820 RUN
```

****

STATIC ELECTRICITY & SOFTWARE/HARDWARE

by Ken Abramson

An information sheet was found enclosed with a shipment of cassette tapes from Western Imperial Magnetics (Richmond). Although the information was aimed at music recording, it probably applies even moreso to computer digital data recording.

..."In some cases, atmospheric & environmental conditions affect ... performance. Some of our customers have had on occasion, clicks amplified on to their cassette copies. This is caused by static electricity. As the static discharges, the spark produces an electromagnetic disturbance. Playing back (or recording) a tape in a machine that has a substantial grounded metal area around the cassette bleeds off any static buildup before it sparks. Our MUSIC MASTER tape eliminates these static problems in other machines."

Although the above was aimed at high speed duplication, a combination of dry weather and fast forwarding or rewinding can lead to similar problems.

In a similar vein, watch out for your HARDWARE during dry weather (especially cold, dry days in Jan or Feb)! By wearing rubber soled shoes and shuffling through certain carpets, you can charge up your body to thousands of volts. If you then handle your computer or its peripherals and hear a spark jump, you will have witnessed the possible destruction of several of the computer chips in your equipment. Moral to the story: WHENEVER WORKING AT YOUR COMPUTER, NEVER WEAR RUBBER SOLED SHOES. IN VERY DRY WEATHER, WORK IN STOCKING FEET!!

```
      CRAFTINESS OF COMPUTER USERS

SINCLAIR  ████████████████████████6

ADAM      ████████████████████5

COMMODORE ████████████████4

ATARI     ████████████3

APPLE     ████████2

I.B.M.    ████1


TOTAL=21   AVERAGE=3.5


    1 REM HORIZONTAL BAR GRAPH
      FOR 2K/16K ZX81/TS1000
      ADAPTED FROM
      "YOUR TS1000 AND ZX81"
      BY DOUGLAS HERGERT

    3 LET U=PI/PI
    4 LET Z=NOT PI
    5 LET L=VAL "21"
    6 PRINT AT VAL "9",VAL "9";"H
ORIZ. BAR GRAPH"
    7 REM DEFINE PARAMETERS
   10 PRINT AT L,Z;"TITLE? (32 CH
ARACTERS MAX.)"
   20 INPUT T$
   30 PRINT AT L,Z;"HOW MANY ITEM
S OR BARS? (9 MAX.)"
   40 INPUT Q
   60 DIM N$(Q,9)
   70 DIM A(Q)
   75 CLS
   80 FOR I=U TO Q
   90 GOSUB VAL "500"
  100 CLS
  110 NEXT I
  115 REM DATA CHECK
  130 GOSUB VAL "600"
  140 FOR I=U TO Q
  150 PRINT I;". ";N$(I);" ";A(I)
  160 NEXT I
  180 PRINT AT L-U,Z;"CORRECTION?
<Y> OR <N>          "
  190 INPUT A$
  200 IF A$<>"Y" THEN GOTO VAL "2
80"
  210 PRINT AT L,Z;"WHICH ITEM NU
MBER?"
  220 INPUT I
  230 IF I>Q THEN GOTO VAL "220"
  240 PRINT AT L-U,Z;
  245 GOSUB VAL "700"
  250 GOSUB VAL "700"
  260 GOSUB VAL "500"
  261 PRINT AT I+U,Z;
  263 GOSUB VAL "700"
  265 PRINT AT I+U,Z;I;". ";N$(I)
;" ";A(I)
  270 GOTO VAL "180"
  290 LET BIG=Z
  300 LET TOT=Z
  310 FOR I=U TO Q
  320 IF A(I)>BIG THEN LET BIG=A(
I)
  330 LET TOT=TOT+A(I)
  340 NEXT I
  350 LET AVE=TOT/Q
  360 LET FAC=L/BIG
  365 REM GRAPH
  370 CLS
  380 GOSUB VAL "600"
  390 FOR I=U TO Q
  400 PRINT N$(I);
  410 FOR J=U TO INT (A(I)*FAC+.5
)
  420 PRINT "█";
  430 NEXT J
  435 PRINT A(I)
  445 PRINT
  450 NEXT I
  455 PRINT
  460 PRINT "TOTAL=";TOT;" AVERA
GE=";INT (AVE*100+.5)/100
  465 COPY
  470 SLOW
  475 POKE 16384,89
  480 STOP
  500 REM INPUT DATA
  505 PRINT AT L-U,Z;"ITEM ";I;
  510 PRINT ". NAME (9 CHARS.):";
  520 INPUT N$(I)
  530 PRINT N$(I)
  540 PRINT "AMOUNT:"
  550 INPUT A(I)
  560 PRINT AT L,Z;"          "
  570 RETURN
  600 PRINT TAB ((32-LEN T$)/2);T
$
  610 PRINT
  620 RETURN
  700 PRINT "
          "
  710 RETURN
 1000 SAVE "HBAR"
 1010 RUN
```

****


```
    5 INK 9: LET r=RND*7: PAPER r
: BORDER r
   10 OVER 1
   14 LET r=INT (RND*9)+1
   15 PRINT r
   20 FOR s=-84 TO 84 STEP r
   26 PLOT 127,87: DRAW s,85
   27 PLOT 127,87: DRAW 85,s
   28 PLOT 127,87: DRAW -85,s
   29 PLOT 127,87: DRAW s,-85
   30 NEXT s
   40 PAUSE 100: CLS : GO TO 5
```

11

MEMBER PROFILE
by Bob Dick

My first computer was a ZX-81, purchased in early 1983 whil I was working on a project in northern Saskatchewan. Due to the difficulty of obtaining software, and the unsatisfactory keyboard, I remained stuck on some very simple applications, using an old black-and-white television set. Later that year, I bought a Zenith green-screen monitor. Just as I was beginning to enjoy the clear display on the monitor, ram-pack wobble caused the computer to fail.

Upon returning to Vancouver in 1984, I bought a T/S 2068, along with some software. With the improved keyboard and (somewhat) clearer owner's manual, it became much more fun using the computer for games and for job-related calculations. Copying and de-bugging listings from IBM and TRS-80 literature provided good practice in simple programming methods.

Recently, the lack of a printer became inconvenient. I purchased a T/S 2040 thermal printer for hard copies of listings, and for graphics. For letter-quality printing, an Olympia "Carrera" electronic typewriter was also purchased. This will print at a rate of about 120 words per minute when connected to the computer through an Aerco parallel interface and an Olympia interface box. This will be in working order in a few days, when the Olympia interface is delivered.

Both the ZX-81 and the 2068, the monitor and some software were ordered by mail from Gladstone in Toronto. I found their service to be quite prompt, but they would substitute items (eg: the first ZX-81 was a British model) or neglect to include all necessary parts (eg: the monitor kit required for the ZX-81). The 2040, Aerco interface and Mscript were ordered by phone from Knighted Computers on 18 December; in spite of the Christmas rush, the order arrived at my door on 24 December, _complete_ .
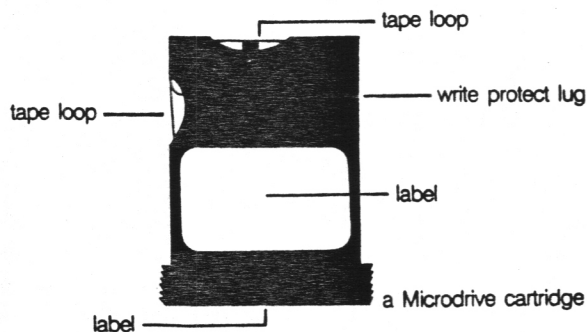
My job applications of the computer are quite simple, but save many hours of dull, repetitive work. An example is the calculation of subsurface stratigraphy from seismic refraction data. The sequence is: measure the slope of each straight portion of a plot of time vs. distance; using a conversion factor for the coordinates, the wave velocity in each is calculated; the distance to each change of slope is measured, and the depth to the harder soil or rock is calculated as $D=(L/2)\sqrt{(V_2-V_1)/(V_2+V_1)}$. This entire sequence is carried out by the simple program attached.

After getting the word processing programs working on the type-writer, I plan to install a modem. I would also like to obtain a ready-to-run statistics program which will work on a spread sheet.

```
10 REM SEISMIC CALCULATIONS
15 CLS
20 PRINT AT 0,0;"SEISMIC CALCU
LATIONS"
25 PRINT AT 1,0;"REFRACTION ME
THOD"
28 PRINT AT 2,0;"R. C. DICK,JU
NE 1986"
29 PRINT AT 4,0;"K= distance/t
ime per graph space"
30 PRINT AT 5,0;"Enter K": INP
UT K
31 PRINT AT 5,15;K
32 PRINT AT 8,0;"If no a3 or L
23, input 0"
40 PRINT AT 10,0;"Enter a1 " :
 INPUT a1
45 PRINT AT 10,15;a1;" degrees
 "
50 PRINT AT 11,0;"Enter a2 ":
INPUT a2
55 PRINT AT 11,15;a2;" degrees
 "
60 PRINT AT 12,0;"Enter a3": I
NPUT a3
65 PRINT AT 12,15;a3;" degrees
 "
70 PRINT AT 14,0;"Enter L12":
INPUT L12
75 PRINT AT 14,15;L12
80 PRINT AT 15,0;"Enter L23":
INPUT L23
85 PRINT AT 15,15;L23
90 LET v1=K*TAN (a1*2*PI/360)
100 LET v2=K*TAN (a2*2*PI/360)
105 IF a3=0 THEN GO TO 120
110 LET v3=K*TAN (a3*2*PI/360)
120 LET d12=(L12/2)*SQR ((v2-v1
)/(v2+v1))
130 IF L23=0 THEN GO TO 150
140 LET d23=(L23/2)*SQR ((v3-v2
)/(v3+v2))
150 PRINT AT 16,5;"v1= ";v1
155 PRINT AT 17,10;"d12= ";d12
160 PRINT AT 18,5;"v2= ";v2
175 IF L23=0 THEN GO TO 200
190 PRINT AT 19,10;"d23= ";d23
195 PRINT AT 20,5;"v3= ";v3
200 PRINT AT 21,0;"For next spr
ead, press RUN"
```


tape loop

write protect lug

tape loop

label

label

a Microdrive cartridge

PARTIAL SCREEN SAVER (2068/SPECTRUM)

The Screen Display is saved as SCREEN$
but can be saved as CODE 16384,6912

DISPLAY Lines 0-7 Start 16384 Bytes 2048

	"	8-15	"	19432	"	2048
	"	0-15	"	16384	"	4096
ATTRIB.	"	0-7	"	22528	"	256
	"	8-15	"	22784	"	256
	"	0-15	"	22528	"	512

Sections above can be SAVED with or
without attributes.   Sections can be
moved up or down screen as required

e.g. SAVED as ""CODE 16384,2048 can be
     LOADED as ""CODE 18432,2048 to move
     display to middle.

```
10 REM PARTIAL PICTURE SAVER
20 LET df=16384: LET attr=22528: LET dfb=
   2048: LET dfa=256
30 CLS:PRINT AT 9,0;"Enter 1 for lines 0
      - 7          2 for lines 8
      - 15         3 for lines 0
      - 15"
40 PRINT AT 15,0;" FIRST PRESS ANY KEY W
   HEN READY":PAUSE 0: PRINT INVERSE 1;AT
   15,0;"   NOW LOAD YOUR SCREEN$
   ": LOAD ""SCREEN$
50 PRINT AT 20,0;" 32 spaces          ";
   AT 21,0;"   32 spaces   "
60 INPUT "Save Section (1, 2 or 3)?";ss
70 IF ss<1 OR ss>3 THEN GOTO 60
80 IF ss=1 THEN GOTO 110
90 IF ss=2 THEN LET df=dfb:LET attr=attr
   +dfa: GOTO 110
100 LET dfb=2*dfb: LET dfa=2*dfa
110 INPUT "What title?";t$: IF LEN t$
    >10 THEN GOTO 110
120 INPUT "Do you want attributes?(y/n)"
    ;g$: IF g$="N" OR g$="n" THEN GOTO
    140
130 SAVE t$CODE attr,dfa
140 SAVE t$CODE df,dfb
150 IF g$="N" OR g$="n" THEN GOTO 170
160 PRINT AT 20,0;"Attr.:";t$;"CODE";attr
    ;",";dfa
170 PRINT AT 21,0;"Displ";t$;"CODE";df;",
    ";dfb
```

13

RCMP raid nets pirated software

by Paul Weinberg
(CC Correspondent)

TORONTO – The largest-ever haul of allegedly pirated software in Canada was recently conducted by the RCMP in the Toronto area.

An estimated $3 million worth of bootleg software programs and manuals were seized at the end of November during RCMP raids of three basement operations.

Invoices, customer lists with hundreds of names, and three computers were also seized in the raids.

The three raided companies were shutdown immediately. Five men were individually charged with fraud over $1,000

and ordered to appear in Ontario provincial court on January 14. Those charged include:
● Brent Murray Radbourne of Brent Computers, Etobicoke, Ont.;
● Paul Regan and Steve Phillips of Photo Insurance, Toronto, and
● Gerald and Yan Lau of Soft City, Scarborough, Ont.

Soft City claims to have been a software evaluation club.

The five charged men are alleged to have fraudulently copied and sold programs owned by hundreds of manufacturers.

The programs were sold across Canada, the United States, and Bermuda at prices ranging from $100 to $200, said RCMP Constable Pierre Riopel.

Microsoft chairman Bill Gates' personal net worth jumped to $350 million plus when his company went public last Spring.

****

**** DAFFYnitions ****

by Bob Crecco, reprinted from the Sinclair Louisville Users Group (SLUG) newsletter, Nov/86.

ASSUMED DECIMAL POINT - located two positions to the right of a programmer's current salary in estimating his own worth.

BIT - the increment by which all programmers slowly go mad.

CHAINING - the method of attaching a programmer to his desk to speed up output.

ERROR - what someone else has made when he disagrees with your computer output.

FIXED WORD LENGTH - four letter words used by programmers when in a state of confusion.

FLOATING CONTROL - occurs when you have to take a wizz but can't leave the computer.

FLOATING POINT - absolute limit before FLOATING CONTROL is lost.

FLOW CHART - graphic representation of the fastest route to the restroom.

INPUT - food, whisky, beer, aspirin, etc.

MACRO - last half of expression of surprise:"HOLY MACRO!"

MEMORY DUMP - amnesia,can occur after certain types of INPUT

CORE DUMP - the 2's complement of FLOATING CONTROL.
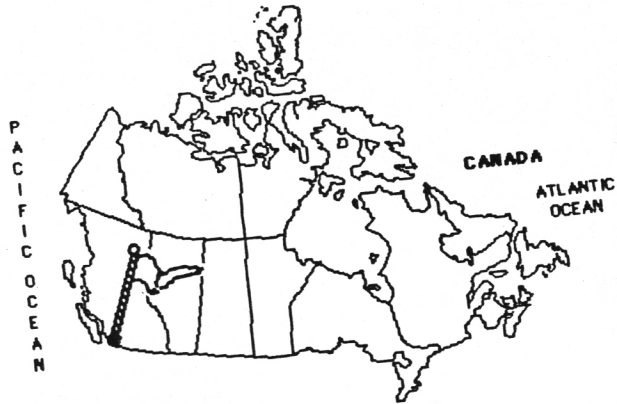
REVIEW: Zebra OS-64 Sixty-Four Column Cartridge
by Chuck Dawson

You may have read in the TS-2068 manual about the 64 column
capability of the computer but never got it to work. Welcome to
the club! Until now, with the possible exception of the MSCRIPT
word processing program, no one could get it to work properly.
Now, Zebra Systems of Woodhaven, New York, has introduced the
OS-64. It is a cartridge that fits inside that little door on
the 2068. When you power up, there it is! It is that easy. You
can PRINT AT; TAB; LPRINT; and LLIST in 64 columns. LPRINT and
LLIST go to a full sized 80 column printer. The interface
driver is built in. COPY will work if you have an EPSON (or
compatable) printer.

The limitations are not those of the cartridge but of the
computer's built in operating system. When 64 columns are in
use, you can have only one paper color and the border will
match. No local color assignments are allowed. The whole
screen will be one paper color and one ink color. The ink is
automatically chosen by the system. Blue paper gives you yellow
ink. White paper gives black ink. The combinations are fixed.
This has consequences you might not think of right off hand.
For instance, when LOADing, you don't get that striped border to
show how things are going. The picture just sits there with no
indication that anything is happening. I hope you have a VU
needle or a light on your recorder to tell you when to shut the
thing off. Also, the memory map is changed. That means that many
programs will not work without modification. Most machine code
is placed high in memory to keep it out of the way, but with
64-column in place, this area is used for stacks and system
variables that will cause a crash when overwritten. I tried it
with Smart Term II hoping to get a 64 column display when
receiving text via the modem, but it didn't work. Some Smart
Alec will probably rewrite it and make it work but it won't be
me.

Strangely enough, PLOT, DRAW, and CIRCLE work as they do in 32
column with x in the range of 0-255 and y in the range of 0-175.
It has been well written and so far the only bug I have found is
the inability to supress a line feed which is sent along with
the carriage return during COPY. I had to change the switch in
my printer to get a proper COPY. They did provide a way to
center the COPY on the paper so I guess we came out even on that
one. They mention in the instructions that you will probably
want to use a monitor instead of a TV. Well, I use a TV and I
think the quality of the display is very acceptable. So, in
summary, for many applications (where color is not important but
lots of text is) this cartridge is just what we have been
waiting for.

The Vancouver Sinclair Users Group has been in existence since 1982. We are a support group for the owners and users of the: Microace, ZX80, ZX81, TS 1000, TS 1500, Spectrum, Spectrum +, TS 2068, and QL Computers.

Pres.--Ken Abramson
V/Pres.-- ?
Treas. & Editor--Rod Humphreys

Our membership dues are only $15.00/year and may be sent to the Treasurer.

> Rod Humphreys
> 2006 Highview Place
> Port Moody, B.C., V3H 1N5

Membership includes a subscription to ZXAppeal - our monthly newsletter. ZXAppeal accepts advertising, our **PREPAID** rates are:

> $20.00 -- FULL PAGE
> $12.00 -- 1/2 PAGE
> $8.00 -- 1/4 PAGE

ZXAppeal has a print run of 75 copies per month for members and is also distributed to approx 40 other Sinclair User Groups throughout North America as well as Overseas via the Network.

Network correspondence may be directed to the Editor at the above address.